

Attorney Docket No. 2004_0248
Serial No. 10/779,718
January 16, 2007

AMENDMENTS TO THE DRAWINGS

Please replace the original drawing sheets containing Figures 1-8 with the attachment sheet of corrected drawing Figures 1-8.

REMARKS

Favorable action of the merits is respectfully requested in view of the foregoing amendments and the following remarks.

I. CLAIM STATUS AND AMENDMENTS

Claims 1-19 were pending in this application when last examined. Claims 2-7 and 9-11 were examined on the merits and stand rejected. Claims 1, 8 and 12-19 were withdrawn as non-elected subject matter.

Claims 1-19 have been cancelled without prejudice or disclaimer thereto. Applicants reserve the right to file a continuation or divisional application on any cancelled subject matter.

New claims 20-24 have been added. Support can be found in original claims 2-6 and 9-10 and throughout the disclosure. No new matter has been added.

Claims 20-24 are pending upon entry of this amendment.

New claims 20-24 are equivalent to allowed claims 1-4 in U.S. 6,746,849 (*i.e.*, parent application Serial No. 09/937,296), with the exception that new claims 20-24 are directed to "A process for detecting the presence of a nucleoside triphosphate" (*i.e.*, the elected invention). A copy of the front page and claims for this patent are attached herewith for the Examiner's convenience. Kindly note the rejections in the instant Office Action are identical to those made in the parent application. The amendments made in the parent placed the claims in condition for allowance. Since similar claim changes have been made in the instant case, the present application should now be in condition for allowance.

The Specification has been amended at page 1 to update the continuation status and to use a more descriptive Title. No new matter has been added.

Attached herewith is a sheet of corrected drawings figures (Figures 1-6). The attached drawings correspond to the corrected figures submitted in the parent application, now U.S. 6,746,849. No new matter has been added.

II. OBJECTIONS TO THE SPECIFICATION

In item 7 on page 3 of the Office Action, the Specification was objected for lacking updated continuation data on page 1. In item 8 on page 3, the Title was objected to on the basis that it is not descriptive of the elected invention.

The present amendment overcomes these objections for reasons which are self-evident.

III. INDEFINITENESS REJECTION

In item 10 on page 4 of the Action, claim 11 was rejected under 35 U.S.C. § 112, second paragraph, as indefinite on the basis that (1) there is insufficient antecedent basis for the phrase “the NDPK is the NDPK of *Myxococcus xanthus* “carrying a Asp112->Cys mutation”, and (2) the term “Asp112->Cys mutation” is indefinite, because there is no recitation of a sequence of *Myxococcus xanthus* NDPK.

This rejection is respectfully traversed as applied to the new claims.

Claim 11 has been cancelled and replaced with new claims 20-24, which correspond in format to allowed claims 1-4 in U.S. 6,746,849 (of the parent). It is respectfully submitted the language in the new claims fully addresses this rejection. Thus, the rejection of claim 11 under 35 U.S.C. § 112, second paragraph, is untenable and should be withdrawn.

IV. WRITTEN DESCRIPTION & ENABLEMENT REJECTIONS

In item 11 on page 5-7, claims 2-7 and 9-10 were rejected under 35 U.S.C. § 112, first paragraph, on the basis that the Specification lacks written description support for the genus of modified NDPK polypeptides. At page 6 of the Action, it was indicated that the Specification discloses a single species of NDPK polypeptide (SEQ ID NO: 2 with Asp112Cys with IDCC label covalently attached to the sulfhydryl of the Cys at position 112).

In item 12 on pages 7-11, claims 2-7 and 9-10 were rejected under 35 U.S.C. § 112, first

paragraph, on the basis that the Specification while enabling for a process for detecting the presence of a nucleoside triphosphate in a sample by detecting a change in the intrinsic fluorescence of an Asp112Cys variant of SEQ ID NO: 2 with an IDCC label covalently attached to the sulfhydryl of the Cys at position 112, wherein a decrease in fluorescence of the Asp112Cys variant of SEQ ID NO: 2 with an IDCC label covalently attached to sulfhydryl of the Cys at position 112 indicates the presence of the nucleoside triphosphate, does not reasonably provide enablement for methods using all NDPKs as encompassed by the claims.

It is respectfully submitted that the present amendment overcomes these rejections.

To begin with, kindly note the claims have been amended to the subject matter indicated by the Office as supported and enabled by the disclosure.

In addition and as discussed above, new claims 20-24 now correspond to allowed claims 1-4 in U.S. 6,746,849 except they relate to nucleoside triphosphate (NTP) instead of nucleoside diphosphate (NDP). Again, the instant rejections are identical to those made in the parent. The amendments made in the parent placed the claims in condition for allowance. Since the same claim changes have been made in the instant case, the present amendment overcomes the above-noted rejections.

Thus, the written description and enablement rejections of claims 2-7 and 9-10 under 35 U.S.C. § 112, first paragraph, are untenable and should be withdrawn.

V. PRIOR ART REJECTIONS

In item 13 on pages 11-12 of the Action, claims 2-3 and 9-10 were rejected under 35 U.S.C. § 102(b) as anticipated by Deville-Bonne (Biochemistry, Vol. 35, pp. 14643-14650, 1996).

In item 14 on pages 12-13 of the Office Action, claims 4-5 were rejected under 35 U.S.C. § 103(a) as obvious over Deville-Boone in view of Schneider (J. Biol. Chem., Vol. 273, pp. 11491-11497, 1998).

These rejections are respectfully traversed as applied to the newly added claims.

To anticipate or render obvious a claim, the cited prior art reference must disclose or suggest each and every element of the claimed invention.

Independent claim 20 is directed to a process for detecting the presence of a nucleoside triphosphate (NTP) in a sample, comprising a step of detecting the phosphorylation of a nucleoside diphosphate kinase (NDPK) to the phosphoenzyme form, wherein the NDPK is an NDPK of *Myxococcus xanthus* having the amino acid sequence of SEQ ID NO: 2, which is modified to carry an IDCC label attached to cysteine at position 112 in both the NDPK's phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

The cited prior art references fail to disclose or suggest a method of detecting NTP. They also fail to disclose or suggest the method of detection using the specific modified NDPK of claim 20, *i.e.*, NDPK of *Myxococcus xanthus* having the amino acid sequence of SEQ ID NO: 2, which is modified to carry an IDCC label attached to cysteine at position 112 of independent claim 20. Also, kindly note claim 20 incorporates the subject matter of claim 6, which was not included in either rejection.

Deville-Boone and Schneider are silent as to this embodiment of the present invention. Accordingly, the cited references do not teach or suggest each and every element of the claimed invention.

Thus, the above-noted prior art rejections of claims 2-5 and 9-10 under 35 U.S.C. § 102(b) and 103(a), are untenable and should be withdrawn.

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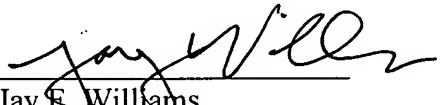
CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

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ATTACHMENTS

1. Submission of Replacement Formal Drawings (7 sheets (A4); Figs. 1-8); and
2. U.S. 6,746,849 (front page and claims only).